

What is claimed is:

1.

Sub B3  
Apparatus for cutting or trimming a stack of sheet members supported on a cutting table, said apparatus comprising:

21  
an elongated knife having a cutting edge extending along an elongated cutting edge axis;  
a knife supporting frame connected to said cutting table;  
guide mechanism mounting said knife to said supporting frame for movement of said knife from a start position wherein said knife is positioned spaced from said cutting table and said stack of sheet members to a cut position wherein said knife moves toward said cutting table and trims or cuts said stack of sheet members;  
said guide mechanism being movable on said frame to a first guide position causing said knife to move in a first direction relative to said cutting edge axis when moving from said start position to said cut position;  
said guide mechanism being movable on said frame to a second guide position causing said knife to move in a second direction opposite from said first direction when moving from said start position to said cut position.

2.

Sub D7  
Apparatus according to claim 1 wherein said guide mechanism comprises a linkage mechanism.

3.

Apparatus according to claim 2 wherein said linkage mechanism includes an elongated base link, a first link pivotally connected to said base link and said knife, and a second link pivotally connected to said base link and said knife.

4.

Apparatus according to claim 3 and further comprising a linkage power means connected to said linkage mechanism for

moving said linkage mechanism between said first and second guide positions.

5.

Apparatus according to claim 4 wherein said linkage power means comprises an extensible fluid cylinder.

6.

Apparatus according to claim 4 wherein said linkage power means is connected to said base link and said support frame.

7.

Apparatus according to claim 4 wherein said base link, said first and second links, and said knife combine to form a parallelogram.

8.

*Sub 64 21*  
Apparatus according to claim 7 and further comprising at least one guide track attached to said frame, and a track follower mounted on said mechanism and guided within said guide track for guided movement therein during movement of said linkage mechanism between said first and second guide positions.

9.

Apparatus according to claim 1 and further comprising a clamp for clamping said stack of sheet members to said table.

10.

Apparatus according to claim 9 and further comprising an extensible cutting cylinder connected to said knife for moving said knife between said start position and said cutting position.

11.

Apparatus according to claim 1 and further comprising a first stop member movable with said knife and a second stop member fixed to said frame, said first and second stop members engaging one another when said knife is in said cut position.

12.

Apparatus according to claim 11 wherein said first and second stop members retentively engage one another when said knife is in said cut position to hold said knife against movement when in said cut position.

13.

Sub 105  
C2 Apparatus for trimming or cutting a stack of sheet members supported on a cutting table, said apparatus comprising:

a support frame connected to said table and extending upwardly therefrom;  
linkage mechanism comprising a base link and first and second side links pivotally connected to said base link and extending downwardly therefrom;  
an elongated knife holder having an elongated knife with a cutting edge mounted thereto, and being pivotally connected to said first and second side links, whereby said base link, said first and second side links, and said knife holder form a collapsible parallelogram;  
an extensible cylinder connected to said frame and to said knife holder for moving said knife from a start position spaced above said sheet members to a cut position engaging and cutting through said sheet members;  
said base link being movable mounted to said support frame for movement from a first link position wherein said first and second links angle downwardly at an inclined first angle when said knife is in said start position to a second link position wherein said first and second links angle downwardly at an inclined second angle opposite from said first angle when said knife is in said start position.

14.

A method for using a knife having a longitudinal knife axis and a cutting edge to cut or trim a stack of sheet

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members supported on a table and having at least first and second edges to be cut or trimmed, said method comprising: trimming or cutting said first edge of said stack by moving said cutting edge of said knife in a downwardly inclined direction extending both downwardly toward said first edge of said stack and laterally in a first lateral direction along said knife axis until said cutting edge engages and cuts through said stack of said sheet members;

lifting said knife upwardly away from said stack of sheet members;

trimming or cutting said second edge of said stack by moving said cutting edge of said knife in a downwardly inclined direction extending both downwardly toward said second edge of said stack and laterally in a second lateral direction opposite from said first lateral direction until said cutting edge engages and cuts through said stack of sheet members.

15.

A method according to claim 14 wherein said stack of sheet members comprises a book having a spine edge extending between said first and second edges to be trimmed, said method comprising rotating said book 180 degrees between said trimming of said first and second edges of said stack, whereby said first and second lateral directions will both extend into said spine edge of said book.

16.

A method according to claim 15 and further comprising clamping said book to said table during said trimming of said first and second edges of said stack.

17.

A method according to claim 14 and further comprising a base link, a first side link and a second side link pivotally connected to said base link and said knife so as to create a collapsible parallelogram from said base link, said first and

second side links and said knife, said method comprising moving said base link in a direction parallel to said cutting edge of said knife from a first link position during said trimming of said first edge of said stack to a second link position during said trimming of said second edge of said stack.

18.

A method according to claim 17 and further comprising holding said knife stationary during said moving of said base link from said first link position to said second link position.

19.

A method according to claim 18 and further comprising using at least one guide track to guide a guide follower attached to said base link during movement of said base link from said first link position to said second link position.

20.

A method according to claim 19 and further comprising guiding a guide follower attached to said base link in an arcuate path during movement of said base link from said first link position to said second link position.

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